to $50,000. A similar request for $500,000 has been made for 1921. The nature of the work to be done is outlined by Dr. Lumsden elsewhere in this number of the JOURNAL. The work is not an experiment, but a demonstrated success, urgently requested by local associations ready to raise their share of the cooperative funds as soon as Congress makes it possible for the Public Health Service to act. If any member of our association thinks there is no need for such county health work and inclines to a belief that any danger of typhoid from rural districts is very remote, he should study the statistics in Bulletin 94 of the Public Health Service.

It has been said that this cooperative work is no untried experiment, but a demonstrated success. It is so much desired that the local authorities raise more than their share of the necessary funds. In the present fiscal year they have contributed more than five times as much to the cooperative funds as has Congress. They are not asking Congress to look after their health, but merely for expert assistance in getting efficient rural health service firmly established. Starting such work is far more difficult than carrying it on when well started, and it is for this special work that Congress is asked to furnish to Dr. Lumsden and his associates the funds necessary for extending these cooperative undertakings. It was the writer's privilege to become personally acquainted during the war period with some of the interesting and gratifying results of Dr. Lumsden's enthusiasm and ability, and on account of this personal knowledge he desires to call the attention of the Association to the desirability of larger federal appropriations for such work.

JOHN M. GOODELL.

SUPERVISION OF WATER PURIFICATION PLANTS IN TEXAS

One of the various duties of the State Board of Health of Texas is the supervision of the public or municipal water supplies of the state, especially those located in the smaller cities and towns. This particular obligation of the board is performed by the Bureau of Sanitary Engineering, a department of the Board of Health. The supervision consists in making sanitary surveys of the watersheds, looking after reservoir and well protection, locating foci of water-borne diseases and giving advice as to the proper operation of water purification and sterilization plants.

In conducting the work of the Bureau of Sanitary Engineering it was found that only a small percentage of the water works super-

intendents and filtration plant operators know anything regarding the quality of the water either before or after it left their plants. The men are not familiar with either chemical or bacteriological methods of analysis whereby they might be able to make such tests as would establish the safety or potability of the water. They are usually engineers or mechanics and concern themselves principally with the mechanical and operation features of the plant; the purity of the water and even the economical details of operation are, too often, neglected.

Several plans of helping such men in charge of water purification plants, and water works men in general, were considered. Conferences with members of the faculty of the University of Texas were arranged and it was decided to formulate a course of instruction and present the work at the University of Texas. The schedule of studies as outlined and carried out embraced the rudimentary principles of the chemical and bacteriological analysis of water, lectures on the scientific operation of filtration and sterilization plants, geology of underground water supplies, protection of watersheds, key rate determination in fixing fire insurance rates, and the legal responsibility of water companies. Illustrated lectures on the various subjects were also given. Conferences were held at which the problems of the individual attendants at the course were discussed in detail.

No books on chemical and bacteriological analysis, written in plain, everyday language which could easily be understood by the class of men we intended to instruct, were obtainable, so a pamphlet was written covering these subjects. Technical formulae and phraseology were omitted wherever it was possible to do so. This booklet also explains in detail the treatment required by various types of water, and the operation of water filtration and sterilization plants.

The results obtained surpass the expectations of both the University authorities and the Bureau of Sanitary Engineering. The men showed a most commendable determination to learn and master all of the work offered. We feel that these men, who, previous to their attendance at this school, knew very little or nothing about methods of analysis or chemical control of filtration and sterilization plants, are now able to make the tests and analytical determinations required in the routine operation of small plants. Personal contact and interchange of ideas with men in similar lines of work has a broadening influence which can be gained in no other way.

Plans have already been formulated so that the course will be offered again next year on a larger and more elaborate scale. It is possible that the length of the term will also be extended from two to four weeks. In order to more permanently establish this school of instruction as a yearly institution at the University, the Texas Water Works Association was organized. This society was formed with more than sixty charter members on its rolls and the list is continuing to grow rapidly. In order to promote the original purpose of the organization, the founders of the society broadened the eligibility qualifications so that all water works men, no matter in what capacity employed, may be admitted as active members. Among other innovations, the association has already considered the advisability of recommending the enactment of a state law providing for the licensing of all water purification plant operators and other persons responsible for the quality of water served to the public.

LEWIS O. BERNHAGEN.

A BRAVE DEED

The brave facing of great danger is reported unexpectedly and for strange reasons in times of peace. On January 23 such bravery was shown by a foreman of the Terre Haute Water Works Company and a switchman in the Terre Haute plant of the American Car & Foundry Company. Frank M. Johnson, the foreman, and another employee of the water company, named Shepherd, visited a meter vault at the entrance to the industrial plant to make the regular monthly meter reading. The meter vault is a vault 12 feet long, $4\frac{1}{2}$ feet wide and $4\frac{1}{2}$ feet deep, with dirt bottom, brick walls and concrete roof covered with about 2 feet of earth. It is entered at one end through a manhole only 20 inches in diameter, with a perforated lid. The vault is built in sandy soil.

Shepherd entered the vault, but before he had been there five minutes Johnson, on looking down, saw that he had become unconscious and was lying with his face against the side of the vault. Johnson called for help and two men ran up. Johnson had meanwhile leaped into the vault, and had succeeded in lifting Shepherd to a little board platform under the manhole by the time the men reached the spot. With their help and that of the switchman above mentioned, Daniel Boyer, who came up about the same time, Shepherd was dragged through the narrow manhole, and recovered later.